WHAT IS CLAIMED IS:

1. A method of communicating a data frame of a source device of a network, comprising the steps of:

resolving the data frame at the source device to ascertain the data frame type; and

forwarding the data frame with a virtual network identifier and priority information from the source device to a destination device of the network.

2. The method of claim 1, wherein the data frame forwarded in the step of forwarding further includes control information.

3. The method of claim 1, wherein the source and destination devices are both distributed switches.

4. The method of claim 3, further comprising the step of providing a handshake protocol for transmitting the data frame, the protocol step comprising,

transmitting a source control message from the source device to the destination device in response to the step of resolving;

transmitting a destination control message from the destination device to the source device; and

forwarding the data frame from the source device to the destination device in response to the source device receiving the destination control message.

5. The method of claim 4, wherein the step of providing occurs in response to the data frame being a unicast frame.

6. The method of claim 4, further comprising the steps of:

enqueueing the source control message in a transmit queue of the destination device; and

determining when the source control message is at a head-of-line position

in the transmit queue and the destination device is ready to transmit the data frame.

7. The method of claim 6, wherein the step of transmitting the destination control message occurs in response to the step of determining.

8. The method of claim 4, wherein if the data frame exceeds a predetermined size, the data frame is processed into a plurality of smaller frame segments such that the step of forwarding occurs repeatedly until the plurality of smaller frame segments have been forwarded to the destination device.

9. The method of claim 8, wherein a first smaller frame segment of the plurality of smaller frame segments is associated with a start frame, which start frame is forwarded to the destination device in the step of forwarding .

10. The method of claim 8, wherein one or more smaller frame segments of the plurality of smaller frame segments are associated with a continuation frame, which continuation frame is forwarded to the destination device in the step of forwarding.

11. The method of claim 8, wherein the plurality of frame segments received at the destination device are reassembled into the data frame.

12. The method of claim 4, wherein the source control message in the step of transmitting is a scheduling request message, and the destination control message in the step of transmitting is a data request message.

13. The method of claim 4, further comprising the step of generating a look-up table, which look-up table contains a mapping of a network address to a device identifier and an outgoing port identifier, such that when the data frame is resolved in the step of resolving, the look-up table is accessed to determine the device identifier and outgoing port to which the data frame is transmitted.

14. The method of claim 13, wherein the look-up table in the step of generating is a source look-up table generated in the source device.

15. The method of claim 13, wherein the address is a MAC address of the destination device.

16. The method of claim 4, wherein the data frame in the step of resolving is a unicast Ethernet frame.

17. The method of claim 4, wherein the destination control message in the step of transmitting is a data request message including a frame identifier that is a receive buffer handle.

18. The method of claim 4, wherein the destination control message in the step of transmitting is a data request message including subtype indicator.

19. The method of claim 4, wherein the destination control message in the step of transmitting is a data reject message including a frame identifier that is a receive buffer handle.

20. The method of claim 4, wherein the destination control message in the step of transmitting is a data reject message including subtype indicator.

21. The method of claim 3, wherein the data frame is a multicast frame that is routed according to one of bitmap information and a multicast identifier field.

22. The method of claim 21, wherein if the data frame exceeds a predetermined size, the data frame is processed into a plurality of smaller frame segments such that the step of forwarding occurs repeatedly until the plurality of smaller frame segments have been forwarded to the destination device.

23. The method of claim 22, wherein a first smaller frame segment of the plurality of smaller frame segments is associated with a start frame, which start frame is forwarded to the destination device in the step of forwarding .

24. The method of claim 22, wherein one or more smaller frame segments of the plurality of smaller frame segments are associated with a continuation frame, which continuation frame is forwarded to the destination device in the step of forwarding.

25. The method of claim 22, wherein the plurality of frame segments received at the destination device are reassembled into the data frame.

26. The method of claim 1, wherein the source device is a distributed switch .and the destination device is a switch fabric.

27. The method of claim 26, further comprising the step of providing a handshake protocol for transmitting the data frame, the protocol step comprising,

transmitting a source control message from the source device to the destination device in response to the step of resolving;

transmitting a destination control message from the destination device to the source device; and

forwarding the data frame from the source device to the destination device in response to the source device receiving the destination control message.

28. The method of claim 27, wherein the step of providing occurs in response to the data frame being a unicast frame.

29. The method of claim 26, further comprising the steps of:

enqueueing the source control message in a transmit queue of the destination device; and

determining when the source control message is at a head-of-line position in the transmit queue and the destination device is ready to transmit the data frame.

30. The method of claim 29, wherein the step of transmitting the destination control message occurs in response to the step of determining.

31. The method of claim 26, wherein if the data frame exceeds a predetermined size, the data frame is processed into a plurality of smaller frame segments such that the step of forwarding occurs repeatedly until the plurality of smaller frame segments have been forwarded to the destination device.

32. The method of claim 31, wherein a first smaller frame segment of the plurality of smaller frame segments is associated with a start frame, which start frame is forwarded to the destination device in the step of forwarding .

33. The method of claim 31, wherein one or more smaller frame segments of the plurality of smaller frame segments are associated with a continuation frame, which continuation frame is forwarded to the destination device in the step of forwarding.

34. The method of claim 31, wherein the plurality of frame segments received at the destination device are reassembled into the data frame.

35. The method of claim 26, wherein the source control message in the step of transmitting is a scheduling request message, and the destination control message in the step of transmitting is a data request message.

36. The method of claim 26, further comprising the step of generating a look-up table, which look-up table contains a mapping of a network address to a device identifier and an outgoing port identifier of an outgoing port, such that when the data frame is resolved in the step of resolving, the look-up table is accessed to determine the outgoing port to which the data frame is transmitted.

37. The method of claim 36, wherein the look-up table in the step of generating is a source look-up table generated in the source device.

38. The method of claim 36, wherein the address is a MAC address of the destination device.

39. The method of claim 26, wherein the data frame in the step of resolving is a unicast Ethernet frame.

40. The method of claim 26, wherein the destination control message in the step of transmitting is a data request message including a frame identifier that is a receive buffer handle.

41. The method of claim 26, wherein the destination control message in the step of transmitting is a data request message including subtype indicator.

42. The method of claim 26, wherein the destination control message in the step of transmitting is a data reject message including a frame identifier that is a receive buffer handle.

43. The method of claim 26, wherein the destination control message in the step of transmitting is a data reject message including subtype indicator.

44. The method of claim 25, wherein the data frame is a multicast frame that is routed according to one of bitmap information and a multicast identifier field.

45. The method of claim 44, wherein if the data frame exceeds a predetermined size, the data frame is processed into a plurality of smaller frame segments such that the step of forwarding occurs repeatedly until the plurality of smaller frame segments have been forwarded to the destination device.

46. The method of claim 45, wherein a first smaller frame segment of the plurality of smaller frame segments is associated with a start frame, which start frame is forwarded to the destination device in the step of forwarding .

47. The method of claim 45, wherein one or more smaller frame segments of the plurality of smaller frame segments are associated with a continuation frame, which continuation frame is forwarded to the destination device in the step of forwarding.

48. The method of claim 45, wherein the plurality of frame segments received at the destination device are reassembled into the data frame.

49. A network architecture for communication between a plurality of network devices, each network device of the plurality of network devices comprising:

a receive buffer for receiving incoming data from an upstream network device of the plurality of network devices;

a transmit buffer for transmitting outgoing data to a downstream network device of the plurality of network devices;

receive control logic operating in conjunction with said receive buffer for controlling said incoming data from said upstream network device; and

transmit control logic operating in conjunction with said transmit buffer for controlling said outgoing data to said downstream network device;

wherein in a first mode, flow of said incoming data and said outgoing data between the plurality of network devices is in one direction;

wherein in a second mode, flow of said incoming data and said outgoing data is bidirectional between the plurality of network devices.